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NPIC/TSSG/RED-007-70
6 January 1970

MEMORANDUM FOR: Director, National Photographic Interpretation Center

THROUGH : Chief, Technical Services & Support Group, NPIC

SUBJECT [redacted] "Vision Comparascope"

1. In response to your recent request, the attached data sheet was obtained and the subject instrument was examined at [redacted] by one of our contract monitors on 15 December 1969. It is a British-built device, distributed by [redacted] and primarily intended for circuit board assembly inspections. Although the demonstrator considered it outstanding in the field, the optical characteristics were quite crude compared to PI equipment. The basic viewing mode is 1X and there is no method for adjusting focus. The optional magnification feature is poorly engineered and the demonstrator apologized for it. However, the Comparascope provided another chance to observe a type of "flicker" viewing; related to that, we will soon be acquiring with the Image Comparison Microstereoscope (ICM). The Comparascope technique employs rotating polarizing filters, although the demonstrator could not explain the details and no drawings were immediately available. The ICM technique involves electrical alternation of the light sources.

2. The mechanical "flicker" method was rejected during the design study phase of the ICM development, because of concern for vibration while viewing high resolution imagery under high magnification. Nevertheless, our examination of the Comparascope reaffirms our belief in the usefulness of the "flicker" technique for comparison viewing. We look forward to T&E of this feature after projected delivery of the ICM in April 1970.

[redacted]
Chief, Research & Engineering Division,
TSSG

Attachment:
[redacted] Comparascope Data Sheet

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Approved For Release 2004/02/11 : CIA-RDP78B05703A000100070024-2

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TSSG/RED	6 January 1970

TO		INITIALS	DATE
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DEP/DIRECTOR			
EXEC/DIRECTOR	3		
SPECIAL ASST	2	[illegible]	1/9
ASST TO DIR			
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REMARKS

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Here is the response to your query of 10 Nov 1969 concerning a pair of eyeglasses manufactured by [redacted]

IP FM 30 (11-68) - OBSOLETE PREVIOUS EDITIONS

APPENDIX

VISUAL ACUITY: Ability to continue to see as separate and clear the details of the visual object as the details are made smaller and closer together - resolving power.

PHORIA: Angular displacement of a covered (occluded) eye when the fellow eye is fixating a distant point - measured in prism diopters (displacement in centimeters/distance in meters).

ESOPHORIA: occluded eye converges

EXOPHORIA: occluded eye diverges

HYPERPHORIA: occluded eye deviates upward

ORTHOPHORIA: occluded eye parallel with fellow eye

HYPEROPIA OR HYPERMETROPIA: (cannot see near objects clearly) Commonly called far-sightedness; a refractive error in which the light rays tend to focus behind the retina due to an abnormally short eyeball or to a deficient refracting apparatus. The condition is corrected by ocular accommodation or by convex lenses.

MYOPIA: (Cannot see ~~near~~ far objects clearly) Commonly called near-sightedness; anterior surface of the ocular lens cannot buldge appropriately, thus the eye is incapable of focusing distant objects.